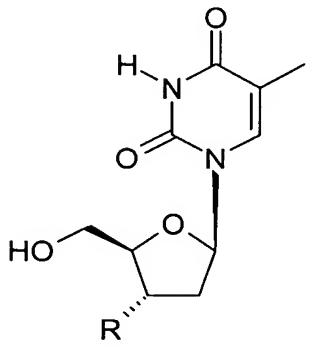
In The Claims:

Please amend claims 3-4, 6-16, and 18-19 without prejudice to the Applicants' rights to pursue the amended subject matters in a future application.

1. (Original) A method for determining thymidine kinase 1 activity in a human or animal body fluid or cell or tissue sample, comprising the steps of reacting said sample with a substrate for said thymidine kinase 1 which substrate is a 3'-derivative of thymidine in the presence of a phosphate donor and a buffer system and determining the amount of 5'-phosphorylated 3'-derivative of thymidine formed, said amount being related to said thymidine kinase 1 activity.

2. (Original) A method according to claim 1, wherein a substrate for TK1 is a 3'-deoxy-thymidine derivative of formula I



in which R is selected from but not limited to the group consisting of NH_2, $NHCOCH_3$, SC_2H_5, OC_2H_5, OBn, N_3, NO_2, $OCOCH_3$, OSO_2CH_3 and F.

3. (Currently Amended) A method according to ~~claims 1 and 2~~ claim 1, wherein the 3'-derivative of thymidine is

AZT and the 5'-phosphorylated 3'-derivative of thymidine is AZTMP.

4. (Currently Amended) A method according to ~~claims 1 to 3~~ claim 1, wherein the amount of said 5'-phosphorylated 3'-derivative of thymidine formed is determined by an immunological method comprising reacting the 5'-phosphorylated 3'-derivative of thymidine formed with at least one antibody capable of selectively reacting with the 5'-phosphorylated 3'-derivative of thymidine to form immunocomplexes.

5. (Original) A method according to claim 4, wherein the amount of 5'-phosphorylated 3'-derivative of thymidine is determined by an immunological method using chemiluminescence.

6. (Currently Amended) A method according to ~~claims 4 and 5~~ claim 4, wherein the amount of said 5'-phosphorylated 3'-derivative of thymidine formed is determined by enzyme linked immunosorbent assay (ELISA).

7. (Currently Amended) A method according to ~~claims 1 to 6~~ claim 1, wherein said buffer comprises at least Dithioerythritol (DTE), ATP, $MgCl_2$ and HEPES or Tris and provides a pH from 6.5 to 8.0.

8. (Currently Amended) A method according to ~~claims 1 to 6~~ claim 1, wherein Uridine monophosphate (UMP) is contained in said buffer.

9. (Currently Amended) A method according to ~~claims 1 to 6~~ claim 1, wherein said substrate is present in a concentration of at least 0,4 μM.

10. (Currently Amended) A method according to ~~claims 1 to 6~~ claim 1, wherein said phosphate donor is present in a concentration of 0,1-10 mM.

11. (Currently Amended) ~~Use of a method according to one of the forgoing claims for the diagnosis of~~ A method of diagnosing and monitoring conditions ~~diseases~~ involving elevated levels of thymidine kinase 1 activity, comprising the steps of reacting human or animal body fluid or cell or tissue sample with a substrate for said thymidine kinase 1 in which the substrate is a 3'-derivative of thymidine in the presence of a phosphate donor and a buffer system and determining the amount of 5'-phosphorylated 3'-derivative of thymidine formed, said amount being related to said thymidine kinase 1 activity.

12. (Currently Amended) ~~Use according to claim 11 for diagnosing~~ The method according to claim 11, wherein the condition is cancer ~~or tumours and for monitoring the progression of cancer or tumours~~.

13. (Currently Amended) ~~Use~~ The method according to claim 12, wherein the cancer is ~~selected from the group consisting of~~ haematological cancer, breast cancer, gastrointestinal cancer, or ~~and~~ prostate cancer.

14. (Currently Amended) ~~Use~~ The method according to claim 11, wherein the condition is a ~~for the identification of a subgroup of patients at~~ high risk of disease progression in Non-Hodgkin's lymphoma ~~and~~ or chronic lymphocytic leukaemia.

15. (Currently Amended) An in vitro method for diagnosing ~~and/~~or therapeutic monitoring of diseases in a human or

animal ~~characterised~~ characterized by ~~in having~~ elevated levels of thymidine kinase 1 activity, comprising the steps of a) obtaining a sample of human or animal body fluid or a cell or tissue sample; b) assaying the sample to determine the thymidine kinase 1 activity according to ~~a~~ the method of ~~claims 1 to 10~~ claim 1; and c) relating the amount of thymidine kinase 1 activity to the clinical status of the human or animal.

16. (Currently Amended) A kit for the in vitro diagnosis ~~and/~~or therapeutic monitoring of diseases in a human or animal ~~characterised~~ characterized by ~~in having~~ elevated levels of thymidine kinase 1 activity, comprising a) a 3'-derivative of thymidine; b) a phosphate donor; c) a buffer; and d) at least one antibody capable of selectively reacting with the 5'-phopshorylated 3'-derivative of thymidine.

17. (Original) A kit according to claim 16, wherein the 3'-derivative of thymidine is AZT and wherein the 5'-phopshorylated 3'-derivative of thymidine is AZTMP.

18. (Currently Amended) A kit according to ~~claims 16 and 17~~ claim 16, further ~~additionally~~ comprising UMP.

19. (Currently Amended) A kit according to claim 16 ~~to 18~~, wherein the reagents are packed together in a container.

20. (New) A kit according to claim 17, further comprising UMP.